

## ABSTRACT

A DWDM thin film filter includes a substrate (11) and a film stack (12). The film stack comprises a plurality of cavities (13). Each cavity includes a first group of mirror layers (21), a second group of mirror layers (22), and a spacer layer (23). Each group of mirror layers includes a plurality of high refractive index thin films (31) and low refractive index thin films (32) alternately deposited one on another. The material of the high refractive index films is a composition of indium-tin oxide. In the preferred embodiment, a thin film filter having 160 layers of film can be produced. Such a thin film filter attains the same or better optical characteristics as a conventional DWDM thin film filter having 180 layers of film.